

DIVATOR CPD

USER MANUAL

1 GENERAL INFORMATION

The Divator CPD is a warning device for low cylinder pressure. Divator CPD consists of a Cylinder Pressure Sensor (CPS) and a Head-Up-Display (HUD). The Divator CPD improves diving safety with a flashing diode warning when the cylinder pressure drops below 55 bar or 800 psi. The HUD interface, with the diode, is mounted on the front of the Divator full-face mask.

Two advantages of the CPD are that it does not need a manual reset after the warning is activated and that it is buddy readable.

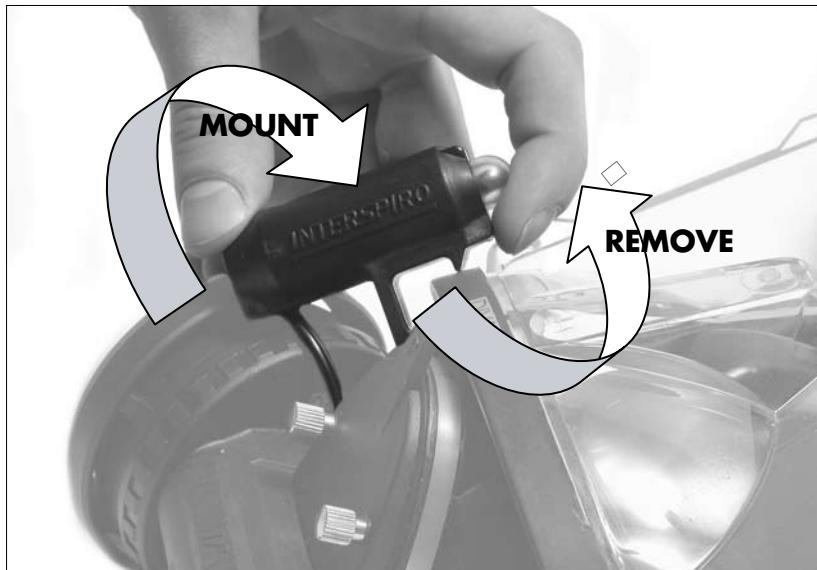
Even though it has been carefully designed and tested the CPD, like all man-made devices, are subject to failures. Only when it is used as a secondary warning device – as an enhancement to the pressure gauge and/or other warning devices – does the CPD improve diving safety.

IMPORTANT INFORMATION

- PLEASE OBSERVE THAT THE CPD DOES NOT RELIEVE THE DIVER THE RESPONSIBILITY TO CONTINUOUSLY MONITOR THE CYLINDER PRESSURE WITH THE PRESSURE GAUGE.
- AT ANY SIGN OF DAMAGE, SUSPICION OF VIOLATION OF SYSTEM INTEGRITY – OR IF THE CPD DOES NOT BEHAVE AS IS DESCRIBED IN THE SECTION “PRE DIVE CHECK OF WARNING DEVICE” – RETURN THE CPD TO THE MANUFACTURER FOR CONTROL AND REPAIR.
- READ ALL DOCUMENTATION BEFORE USE
- WIND THE CORD ACCORDING TO THE ASSEMBLY INSTRUCTIONS

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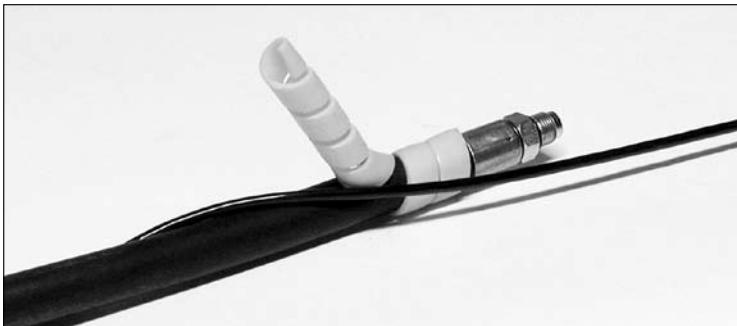
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2 TECHNICAL INFORMATION

The CPD consists of two components: the CPS, a high-pressure mechanical sensor, and the HUD, a device mounted on the lower frame halve of the Divator mask containing the diode interface. These two components are joined with an electric cord running along the breathing hose.

The flashing diode warning is activated when the cylinder pressure drops below 55 bar or 800 psi. When the cylinder pressure drops below 10 bar or 145 psi the warning is automatically reset, a manual power down is thus never necessary. It is important that the cylinder valve is closed and that the breathing circuit is emptied after the dive to avoid draining the battery.

- Under normal use the CPD is designed and tested for 10 service free years. The definition of normal use is 100 dives yearly with 6 minutes of flashing time each dive.
- The CPD is designed to be secure from leakage and has a built-in safety valve.
- Under normal conditions the safety valve release bubbles when the diver is rising to surface.
- The CPS and pressure gauge must be connected to a pressure outlet with flow restrictor according to the requirements of EN250.

3 TECHNICAL DATA

Service free life	10 years
Max operating depth	100 metres
Max operating pressure	300 bar
Operating temperature	-40°C to +70°C
Warning activation	55 ±5 bar

The maximum tension load of cord and cord connections are approx. 100 N (10 kg)

The CPD is designed and tested according to EN250.

The CPD safety valve opens at 2–6 bar

4 CPD CONFIGURATIONS

- CPD 1.20 m (Divator MKII)
Including HP Connection 97193-01 to be mounted on Divator MKII.
Part number 89100-04
- CPD 1.45 m
Adopted for hose 336 190 389 820 or 800-850 mm / 30-34 inches hose.
Part number 89100-03
- CPD 1.75 m
Part number 89100-01

5 USER INSTRUCTIONS

PRE-DIVE PROCEDURES

Attaching the HUD on the Divator Mask

1. Attach the HUD and place the cord under the breathing valve. [IMAGE 1]
2. Never force the HUD onto the facemask, angle the device and gently push until it snaps on. Non-compliance may damage the facemask or HUD. [IMAGE 2]

PRE-DIVE CHECK OF WARNING DEVICE

1. Open the cylinder valve and closely monitor the HUD. At least one flash should be seen when the system is pressurised.
2. If no flash was detected a full warning device function test should be performed. Close the cylinder valve, monitor the pressure gauge, slowly depressurise the breathing circuit using the breathing valve drain button. Between 50 and 60 bar or 700 and 840 psi the diode should start flashing. The flashing should stop when depressurized.

POST-DIVE PROCEDURES

Detaching the HUD from the Divator Mask

1. If necessary detach the HUD from the Divator Mask. Tilt by pulling the HUD away from the visor using a finger. [IMAGE 1]



ATTENTION! DO NOT REMOVE THE HUD AS SHOWN IN IMAGE 2. NEVER FORCE THE HUD OFF THE FACEMASK, ANGLE THE DEVICE AND GENTLY PULL UNTIL IT SNAPS OFF. NON-COMPLIANCE MAY DAMAGE THE FACEMASK OR HUD.

2. Clean the CPD with fresh water. If necessary use a mild soap cleansing fluid. Let the CPD dry in air.

6 PERIODIC INSPECTION

Periodic inspection should be performed once a year or when there is a suspicion that the CPD does not function properly.

1. On a protocol to be filed, make a note of the HUD identity number (the identity number consists of year (2 digits), week (2 digits) and a serial number.)
2. Follow the instructions in the section Pre-Dive Check of Warning Device to perform a full warning device function test.
3. Do a full visual inspection of the CPD.
4. If there are any signs of damage or if the CPD does not behave according to this manual return the CPD to the manufacturer for control and repair.

7 ASSEMBLY INSTRUCTION

Certified service and maintenance staff should perform the following assembly instructions.

WINDING THE CORD AROUND THE BREATHING HOSE

1. Mount the plastic coil two to three turns around the breathing hose. Adjust a suitable cord length from HUD to breathing hose. Secure the cord to the breathing hose with the coil band (two to three turns). Release the cord from the coil band and extend the twining of the coil band an additional two to three turns around the breathing hose. [IMAGE 3] Continue to wind the coil band.
2. Wind the cord around the breathing hose by straightening the cord and rotate the breathing hose around it. [IMAGE 4]
3. At the breathing hose end nipple repeat the coil band winding from 1 above. [IMAGE 5 & 6]
4. Complete assembly by securing the cord to the breathing hose. [IMAGE 7]

CPS ASSEMBLY INSTRUCTION

1. Mount the CPS to the secondary high pressure outlet. Tools: 22 mm U-spanner (torque: 15 Nm).

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